Amendments to the Claims

Kindly amend claims 1, 12, 13, 24, 25 & 36 as set forth below, and cancel claims 10, 11, 22, 23, 34 & 35 without prejudice. In accordance with current amendment practice, all pending claims are reproduced below. The changes in the amended claims are shown by underlining (for added matter) and strikethrough/double brackets (for deleted matter).

1.   (Currently Amended) A method of topology propagation in a distributed computing environment, said method comprising:

repeatedly sending group connectivity messages from at least one group leader to identified nodes of at least one group of nodes within the distributed computing environment;

discontinuing said sending of group connectivity messages during a time period of no topology change within the distributed computing environment; [[and]]

reinitiating repeated sending of group connectivity messages from the at least one group leader upon identification of a topology change within the distributed computing environment[[.]];

wherein said discontinuing comprises for each group leader discontinuing said sending of group connectivity messages when a number of messages sent from the group leader to the identified nodes of the at least one group of nodes reaches a set limit after identification of the topology change within the distributed computing environment, and wherein the set limit is greater than one; and

implementing said sending, said discontinuing, and said reinitiating without employing acknowledgement messages during said topology propagation.

2.   (Original) The method of claim 1, wherein the distributed computing environment comprises at least two networks each having at least one group of identified nodes, and wherein said method further comprises employing within each group of the at least two networks a heartbeat protocol to ensure continued presence of each identified node within the group.

3.   (Original) The method of claim 2, wherein the at least two networks of the distributed computing environment comprise heterogenous networks.

4.   (Original) The method of claim 2, wherein at least one node of the distributed computing environment has at least two adapters, said at least two adapters coupling said at least one node to said at least two networks, and wherein said sending comprises sending first group connectivity messages (GCMs) from a first group leader to identified nodes of a first group of nodes on a first network of said at least two networks, said at least one node comprising an identified node of said first group of nodes, and forwarding said first GCMs by said at least one node to a second group of nodes on a second network of said at least two networks.

5.   (Original) The method of claim 4, wherein said first GCMs received at identified nodes of said first group of nodes and identified nodes of said second group of nodes are employed by each said identified node to update a local network connectivity table (NCT).

6.   (Original) The method of claim 4, wherein said sending further comprises sending second GCMs from a second group leader to identified nodes of the second group of nodes, and forwarding said second GCMs by said at least one node to the first group of nodes on the first network of the at least two networks.

7.   (Original) The method of claim 6, wherein said sending second GCMs by said second group leader is responsive to receiving new information in said forwarded first GCMs at said second group leader.

8.   (Original) The method of claim 6, wherein said discontinuing comprises for each group leader discontinuing said sending of group connectivity messages when a number of messages sent from the group leader reaches a set limit after identification by said group leader of a topology change within the distributed computing environment.

9.   (Original) The method of claim 8, wherein said reinitiating comprises identifying said topology change within a distributed computing environment, said identifying comprising at least one of: receiving at a group leader a node connectivity message which conflicts with a local network connectivity table value, receiving at a group leader a group connectivity message which conflicts with a local network connectivity table value, identifying that a local adapter belongs to a different adapter membership group, or identifying that a local adapter has become disabled.

10-11. Canceled.

12.   (Currently Amended) ~~The method of claim 1,~~ A method of topology propagation in a distributed computing environment, said method comprising:

    sending group connectivity messages from at least one group leader to identified nodes of at least one group of nodes within the distributed computing environment;

    discontinuing said sending of group connectivity messages during a time period of no topology change within the distributed computing environment;

    reinitiating sending of group connectivity messages from the at least one group leader upon identification of a topology change within the distributed computing environment; and

    wherein said reinitiating sending of group connectivity messages comprises at least one of receiving at a group leader a node connectivity message which conflicts with a local network connectivity table value, receiving at a group leader a group connectivity message which conflicts with a local network connectivity table value, identifying that a local adapter belongs to a different adapter membership group, or identifying that a local adapter has become disabled.

13. (Currently Amended) A system for topology propagation in a distributed computing environment, said system comprising:

means for repeatedly sending group connectivity messages from at least one group leader to identified nodes of at least one group of nodes within the distributed computing environment;

means for discontinuing said sending of group connectivity messages during a time period of no topology change within the distributed computing environment; [[and]]

means for reinitiating repeated sending of group connectivity messages from the at least one group leader upon identification of a topology change within the distributed computing environment[[.]];

wherein said means for discontinuing comprises for each group leader means for discontinuing said sending of group connectivity messages when a number of messages sent from the group leader to the identified nodes of the at least one group of nodes reaches a set limit after identification of the topology change within the distributed computing environment, and wherein the set limit is greater than one; and

implementing said means for sending, said means for discontinuing, and said means for reinitiating without employing acknowledgement messages during said topology propagation.

14. (Original) The system of claim 13, wherein the distributed computing environment comprises at least two networks each having at least one group of identified nodes, and wherein said system further comprises means for employing within each group of the at least two networks a heartbeat protocol to ensure continued presence of each identified node within the group.

15. (Original) The system of claim 14, wherein the at least two networks of the distributed computing environment comprise heterogenous networks.

16.   (Original) The system of claim 14, wherein at least one node of the distributed computing environment has at least two adapters, said at least two adapters coupling said at least one node to said at least two networks, and wherein said means for sending comprises means for sending first group connectivity messages (GCMs) from a first group leader to identified nodes of a first group of nodes on a first network of said at least two networks, said at least one node comprising an identified node of said first group of nodes, and means for forwarding said first GCMs by said at least one node to a second group of nodes on a second network of said at least two networks.

17.   (Original) The system of claim 16, wherein said first GCMs received at identified nodes of said first group of nodes and identified nodes of said second group of nodes are employed by each said identified node to update a local network connectivity table (NCT).

18.   (Original) The system of claim 16, wherein said means for sending further comprises means for sending second GCMs from a second group leader to identified nodes of the second group of nodes, and means for forwarding said second GCMs by said at least one node to the first group of nodes on the first network of the at least two networks.

19.   (Original) The system of claim 18, wherein said means for sending second GCMs by said second group leader is responsive to receiving new information in said forwarded first GCMs at said second group leader.

20.   (Original) The system of claim 18, wherein said means for discontinuing comprises for each group leader means for discontinuing said sending of group connectivity messages when a number of messages sent from the group leader reaches a set limit after identification by said group leader of a topology change within the distributed computing environment.

21.   (Original) The system of claim 20, wherein said means for reinitiating comprises means for identifying said topology change within a distributed computing environment, said means for identifying being responsive to at least one of: receiving at a group leader a node connectivity message which conflicts with a local network connectivity table value, receiving at a group leader a group connectivity message which conflicts with a local network connectivity table value, identifying that a local adapter belongs to a different adapter membership group, or identifying that a local adapter has become disabled.

22-23. Canceled.

24.   (Currently Amended) ~~The system of claim 13,~~ A system for topology propagation in a distributed computing environment, said system comprising:

        means for sending group connectivity messages from at least one group leader to identified nodes of at least one group of nodes within the distributed computing environment;

        means for discontinuing said sending of group connectivity messages during a time period of no topology change within the distributed computing environment;

        means for reinitiating sending of group connectivity messages from the at least one group leader upon identification of a topology change within the distributed computing environment; and

        wherein said means for reinitiating sending of group connectivity messages is responsive to at least one of receiving at a group leader a node connectivity message which conflicts with a local network connectivity table value, receiving at a group leader a group connectivity message which conflicts with a local network connectivity table value, identifying that a local adapter belongs to a different adapter membership group, or identifying that a local adapter has become disabled.

25. (Currently Amended) At least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method of topology propagation in a distributed computing environment, comprising:

repeatedly sending group connectivity messages from at least one group leader to identified nodes of at least one group of nodes within the distributed computing environment;

discontinuing said sending of group connectivity messages during a time period of no topology change within the distributed computing environment; [[and]]

reinitiating repeated sending of group connectivity messages from the at least one group leader upon identification of a topology change within the distributed computing environment[[.]];

wherein said discontinuing comprises for each group leader discontinuing said sending of group connectivity messages when a number of messages sent from the group leader to the identified nodes of the at least one group of nodes reaches a set limit after identification of the topology change within the distributed computing environment, and wherein the set limit is greater than one; and

implementing said sending, said discontinuing, and said reinitiating without employing acknowledgement messages during said topology propagation.

26. (Original) The at least one program storage device of claim 25, wherein the distributed computing environment comprises at least two networks each having at least one group of identified nodes, and wherein said method further comprises employing within each group of the at least two networks a heartbeat protocol to ensure continued presence of each identified node within the group.

27. (Original) The at least one program storage device of claim 26, wherein the at least two networks of the distributed computing environment comprise heterogeneous networks.

28.   (Original) The at least one program storage device of claim 26, wherein at least one node of the distributed computing environment has at least two adapters, said at least two adapters coupling said at least one node to said at least two networks, and wherein said sending comprises sending first group connectivity messages (GCMs) from a first group leader to identified nodes of a first group of nodes on a first network of said at least two networks, said at least one node comprising an identified node of said first group of nodes, and forwarding said first GCMs by said at least one node to a second group of nodes on a second network of said at least two networks.

29.   (Original) The at least one program storage device of claim 28, wherein said first GCMs received at identified nodes of said first group of nodes and identified nodes of said second group of nodes are employed by each said identified node to update a local network connectivity table (NCT).

30.   (Original) The at least one program storage device of claim 28, wherein said sending further comprises sending second GCMs from a second group leader to identified nodes of the second group of nodes, and forwarding said second GCMs by said at least one node to the first group of nodes on the first network of the at least two networks.

31.   (Original) The at least one program storage device of claim 30, wherein said sending second GCMs by said second group leader is responsive to receiving new information in said forwarded first GCMs at said second group leader.

32.   (Original) The at least one program storage device of claim 30, wherein said discontinuing comprises for each group leader discontinuing said sending of group connectivity messages when a number of messages sent from the group leader reaches a set limit after identification by said group leader of a topology change within the distributed computing environment.

33.   (Original) The at least one program storage device of claim 32, wherein said reinitiating comprises identifying said topology change within a distributed computing environment, said identifying comprising at least one of: receiving at a group leader a node connectivity message which conflicts with a local network connectivity table value, receiving at a group leader a group connectivity message which conflicts with a local network connectivity table value, identifying that a local adapter belongs to a different adapter membership group, or identifying that a local adapter has become disabled.

34- 35. Canceled.

36.   (Currently Amended) ~~The at least one program storage device of claim 25,~~ At least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method of topology propagation in a distributed computing environment, the method comprising:

   sending group connectivity messages from at least one group leader to identified nodes of at least one group of nodes within the distributed computing environment;

   discontinuing said sending of group connectivity messages during a time period of no topology change within the distributed computing environment;

   reinitiating sending of group connectivity messages from the at least one group leader upon identification of a topology change within the distributed computing environment; and

   wherein said reinitiating sending of group connectivity messages comprises at least one of receiving at a group leader a node connectivity message which conflicts with a local network connectivity table value, receiving at a group leader a group connectivity message which conflicts with a local network connectivity table value, identifying that a local adapter belongs to a different adapter membership group, or identifying that a local adapter has become disabled.